

Additional Requirements for Dip Tanks Used for Specific Processes

WAC 296-835-130

Summary

YOUR RESPONSIBILITY:

Safeguard employees working with dip tanks used for specific processes

You must

HARDENING OR TEMPERING

Meet specific requirements if you use a hardening or tempering tank
WAC 296-835-13005
130-3

ELECTROSTATIC EQUIPMENT

Meet specific requirements if you use electrostatic equipment
WAC 296-835-13010
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FLOW COATING

Meet specific requirements if you use flow coating
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ROLL COATING

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Additional Requirements for Dip Tanks Used for Specific Processes

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Summary

(Continued)

VAPOR DEGREASING
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SPRAY CLEANING OR DEGREASING
Control liquid spray over an open surface cleaning or degreasing tank
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Additional Requirements for Dip Tanks Used for Specific Processes

WAC 296-835-130

Rule

Specific
Processes



HARDENING OR TEMPERING

WAC 296-835-13005

Meet specific requirements if you use a hardening or tempering tank

You must

- (1) Provide an automatic fire extinguishing system or an automatic dip tank cover for any hardening and tempering tank that uses flammable or combustible liquids and:
 - Holds 500 gallons (1893 L) or more of liquid
 - OR**
 - Has 25 square feet (2.37 m²) or more of liquid surface area.
- (2) Prevent fires
 - Make sure hardening and tempering tanks are:
 - **Not** located on or near combustible flooring
 - Located as far away as practical from furnaces
 - Equipped with noncombustible hoods and vents (or equally effective devices) for venting to the outside.
 - Treat vent ducts as flues and keep them away from combustible material, particularly roofs.

-Continued-



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Rule

WAC 296-835-13005 (Continued)

- (3) Make sure air under pressure isn't used to:
- Fill the tank
- OR**
- Agitate the liquid in the tank.
- (4) Equip each tank with an alarm that will sound when the temperature is within 50°F (10°C) of the liquid's flashpoint (alarm set point).
- (5) Make sure a limit switch shuts down conveyors supplying work to the tank when the temperature reaches the alarm set point, if operationally practical.
- (6) Have a circulating cooling system if the temperature of the liquid can exceed the alarm set point.



Note:

The bottom drain of the tank may be combined with the oil circulating system if the requirements for bottom drains in WAC 296-835-12015 are satisfied.

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Rule

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ELECTROSTATIC EQUIPMENT

WAC 296-835-13010

Meet specific requirements if you use electrostatic equipment

You must

- (1) Provide safe electrical equipment.
 - Make sure electrodes in your equipment are:
 - Substantial
 - Rigidly supported
 - Permanently located
 - Effectively insulated from ground by insulators
 - Make sure the insulators are:
 - Nonporous
 - Noncombustible
 - Kept clean and dry

-Continued-



Additional Requirements for Dip Tanks Used for Specific Processes

WAC 296-835-130

Rule

WAC 296-835-13010 (Continued)

You must

- Make sure high voltage leads to electrodes are effectively:
 - Supported on permanent, suitable insulators
 - Guarded against accidental contact or grounding.
- (2) Make sure transformers, powerpacks, control apparatus, and all other electrical parts of the equipment:
 - Are located outside the vapor area

OR

 - Meet the requirements of WAC 296-835-12040.



Exemption:

High voltage grids and their connections may be located in the vapor area without meeting the requirements of WAC 296-835-12040.

You must

- (3) Safeguard paint detearing operations.
 - Use approved electrostatic equipment in paint detearing operations.
- (4) Make sure goods being paint deteared are:
 - Supported on conveyors
 - **Not** manually handled.

-Continued-

Additional Requirements for Dip Tanks Used for Specific Processes

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Rule

Specific
Processes



WAC 296-835-13010 (Continued)

You must

- (5) Keep a minimum safe distance (twice the sparking distance) between goods being paint deteared and the electrodes or conductors of the electrostatic equipment at all times by:
- Arranging the conveyors to provide the necessary distance
 - Supporting the goods to prevent swinging or movement, if necessary
 - Post a sign that shows the minimum safe distance (twice the sparking distance) near the equipment, where it can be easily seen.
- (6) Keep paint detearing operations separate from storage areas and people by using fences, rails or guards that are:
- Made of conducting material
 - Adequately grounded.
- (7) Protect paint detearing operations from fire by installing:
- Automatic sprinklers
- OR**
- An approved automatic fire extinguishing system.
- (8) Collect and remove paint deposits by:
- Providing removable drip plates and screens
 - Cleaning these plates and screens in a safe location.

-Continued-



Additional Requirements for Dip Tanks Used for Specific Processes

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Rule

WAC 296-835-13010 (Continued)

You must

(9) Make sure electrostatic equipment has automatic controls that immediately disconnect the power supply to the high-voltage transformer and signal the operator, if:

- Ventilating fans or equipment stop or fail for any reason
- Conveyors don't work properly
- A ground (or imminent ground) occurs anywhere in the high-voltage system

OR

- Goods being paint deteared come within twice the sparking distance of the electrodes or conductors of the equipment.

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FLOW COATING

WAC 296-835-13015

Meet specific requirements if you use a flow coating process

You must

- (1) Make sure all piping is substantial and rigidly supported.
- (2) Make sure the paint is supplied by a:
 - Gravity tank that doesn't hold more than 10 gallons (38 L)
 - OR**
 - Direct low-pressure pumping system.
- (3) Have an approved heat-actuated device that shuts down the pumping system if there is a fire.



Note:

The area of the sump, and any areas on which paint flows, should be included in the area of dip tank.



Additional Requirements for Dip Tanks Used for Specific Processes

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Rule

ROLL COATING

WAC 296-835-13020

Take additional precautions if your roll coating operation uses a liquid that has a flashpoint below 140°F (60°C)

Important:

This section applies to the processes of roll coating, roll spreading, or roll impregnating that use a liquid having a flashpoint below 140°F (60°C). Material may be passed directly through a tank or over the surface of a roller that revolves partially submerged in the liquid.

You must

- Prevent sparks from static electricity by:
 - Bonding and grounding all metallic parts (including rotating parts) and installing static collectors

OR

- Maintaining a conductive atmosphere (one with a high relative humidity, for example) in the vapor area.

Additional Requirements for Dip Tanks Used for Specific Processes

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Rule

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VAPOR DEGREASING

WAC 296-835-13025

Provide additional safeguards for vapor degreasing tanks

You must

- (1) Make sure, if the tank has a condenser or a vapor-level thermostat, that it keeps the vapor level at least:
 - 36 inches (91 cm) below the top of the tank if the width of the tank is 72 inches or more

OR

 - 1/2 the tank width below the top of the tank if the tank is less than 72 inches wide.
- (2) Make sure, if you use gas as a fuel to heat the tank liquid, that the combustion chamber is airtight (except for the flue opening) to prevent solvent vapors from entering the air-fuel mixture.
- (3) Make sure the exhaust flue:
 - Is made of corrosion-resistant material
 - Extends to the outside
 - Has a draft diverter if mechanical exhaust is used.
- (4) Take special precautions to keep solvent vapors from mixing with the combustion air of the heater if chlorinated or fluorinated hydrocarbon solvents (for example, trichloroethylene or freon) are used in the dip tank.

-Continued-



Additional Requirements for Dip Tanks Used for Specific Processes

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Rule

WAC 296-835-13025 (Continued)

(5) Keep the temperature of the heating element low enough to keep a solvent or mixture from:

- Decomposing

OR

- Generating excessive vapor.

SPRAY CLEANING OR DEGREASING

WAC 296-835-13030

Control liquid spray over an open surface cleaning or degreasing tank

You must

- Control the spray to the greatest extent feasible by:
 - Enclosing the spraying operation as completely as possible
 - Using mechanical ventilation to provide enough inward air velocity to prevent the spray from leaving the vapor area.



Note:

Mechanical baffles may be used to help prevent the discharge of spray.



Reference:

Spray painting operations are covered in Spray Finishing Using Flammable and Combustible Materials, WAC 296-24-370, and Spray-finishing Operations, WAC 296-62-11019.